PATENT SPECIFICATION

376,744

Application Date: April 11, 1931. No. 10,722/31.

" Jan. 8, 1932. No. 607/32.

One Complete Left: Jan. 11, 1932.

Complete Accepted: July 11, 1932.

PROVISIONAL SPECIFICATION.

No. 10,722, A.D. 1931.

Apparatus for Creating Spreading Rays of Coloured Light.

We, HOLOPHANE LIMITED, a company organised and existing under the laws of Great Britain, and ROLLO GILLESPIE WILLIAMS, a British subject, both of Holophane House, Elverton Street, Vincent Square, London, S.W.1, England, do hereby declare the nature of this invention to be as follows:—

The present invention relates to improvements in apparatus for forming radiating bands of coloured light on a flat surface such as the wall or curtain of a cinema. Apparatus has already been proposed for this purpose but the arrangements suggested have been costly to manufacture and expensive to operate.

The present invention is designed to provide a form of apparatus of an inexpensive nature which can be operated with the use of a single light source.

The invention comprises a lighting device in which the light source is arranged behind the apex of a V-shaped opening in an opaque screen with coloured translucent screens overlapping the edges of the said V-opening.

To carry out the invention in its preferred form, we provide a container for the lamp of opaque material preferably with a black inner wall surface. A lamp socket is mounted on one wall of this container and a V-shaped opening is provided on the opposite wall. On the inner side of the wall with this opening a suitable framework is provided adapted to support plates of glass or other translucent material which will vary in colour according to the bands of colour it is desired to throw on the wall or the like.

When these plates are in position their edges overlap and close the apex of the V-opening and extend along the edges of said opening substantially parallel with said edges.

In use the light source in the container beneath the opening produces a series of bands or rays of colour on the wall or like surface radiating out from a central point. It will be readily understood that any desired series of bands of colours may be obtained by changing the coloured plates in the V-opening of the container.

Very attractive effects are obtained by fitting a red plate overlapping one edge and a green plate overlapping the opposite edge of said opening.

It should be understood that the apparatus forming this invention may be employed in connection with other lighting apparatus, for instance a cornice lighting trough. Very fine effects may be obtained by arranging in such a trough a central opaque plate with a V-opening and the above described coloured plates overlapping the edges of said V-opening.

Dated this 11th day of April, 1931.
SEFTON-JONES, O'DELL & STEPHENS,
Chartered Patent Agents,
285, High Holborn, London, W.C.1,
Agents for the Applicants.

PROVISIONAL SPECIFICATION.

No. 607, A.D. 1932.

Improvements in Apparatus for Creating Spreading Rays of Coloured Light.

We, HOLOPHANE LIMITED, a company organised and existing under the laws of Great Britain, and ROLLO GILLESPIE WILLIAMS, a British subject, both of Holophane House, Elverton Street, Vincent square, London, S.W.1, do hereby declare the nature of this invention to be as follows:—

The present invention relates to improvements in the apparatus for forming

radiating bands of coloured light on a flat surface such as a wall described in our patent application No. 10,722/31.

In this application we have described a lighting device in which the light source is arranged behind the apex of a V-shaped opening in an opaque screen provided with several coloured translucent screens overlapping the edges of the said V-shaped opening.

Experiments have shown that any form of opening may be employed for the purpose in view, although for many purposes a V-shaped opening is preferable to any other form of opening.

Instead of a single aperture in the container a series of apertures may be employed with their corresponding plates of translucent material in several colours. Again instead of a single lamp a series of lamps may be employed in the same container coacting with a series of corresponding apertures.

The best results are obtained from a lamp with a filament of the form known as "horseshoe". The lamp is so placed in the container that the filament is approximately at right angles to the surface to be illuminated and with the gap in the filament between the ends of the horseshoe running parallel with said surface or at a small angle in relation to it. The aperture or apertures in the container are always in a plane approximately parallel with the plane of the lamp filament. These apertures are either completely or partly filled with light transmitting material arranged to form clearly defined bands of colour in a design on a flat surface in not less than two colours and in the absence of coloured screens white bands and shadow bands. The interior surfaces of the container on which the light falls may be formed of any suitable light absorbing or non-reflecting material.

Dated this 8th day of January, 1932.

SEFTON-JONES, O'DELL & STEPHENS,
Chartered Patent Agents,
285, High Holborn, London, W.C.1,
Agents for the Applicants.

COMPLETE SPECIFICATION.

Apparatus for Creating Spreading Rays of Coloured Light.

We, HOLOPHANE LIMITED, a company organised and existing under the laws of Great Britain, and ROLLO GILLESPIE WILLIAMS, a British subject, both of Holophane House, Elverton Street, Vincent Square, London, S.W.1, England, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

An apparatus has been suggested for producing lighting effects in connection with theatrical stage lighting or similar places where coloured lighting is required. Such apparatus has comprised an oblong box made of wood or metal within which electric lighting lamps are fixed, one side of said box being formed with openings and fitted with one or more slides each containing openings alternately fitted with coloured glass. These slides were designed to be moved backwards and forwards by means of levers or other similar devices for the purpose of producing any desired colour lighting effect which is evenly distributed and diffused.

The present invention relates to improvements in apparatus for forming radiating bands of coloured light on a flat surface such as the wall or curtain of a cinema and is designed to provide a form of apparatus for this purpose of an inexpensive nature involving a box containing the light source which apparatus can be operated with the use of a single light source.

In contra distinction to the apparatus for producing lighting effects suggested, only the light direct from the light source is required and all other light must be removed since reflected light from the interior walls of the box containing the light source must tend to destroy the clearly defined radiating bands of colour the invention is designed to produce.

Briefly stated our invention comprises a lighting device in which the light source is positioned in a container with interior wall surfaces formed of light absorbing or non-reflecting material behind an opening in the wall of said container with coloured translucent screens overlapping the edges of the said opening arranged to form clearly defined bands of colour in a predetermined design on a flat surface.

Our invention is shown by way of example in the accompanying drawings in which:—

Figure 1 is a side view of a container in position against a wall surface.

Figure 2 is a plan view of Figure 1

showing a V-shaped aperture.

Figure 3 is a sectional side view on the line A—B of Figure 2.

Figure 4 is a sectional side view of a multiple lamp unit.

Figure 5 is a plan view, partly broken away, of Figure 4 and

Figure 6 is a perspective view on a smaller scale of the device shown in Figures 4 and 5 in position against a wall surface.

The construction shown in Figures 1, 2 and 3 comprises a container 1 for the lamp 2 of opaque material preferably with a black inner wall surface. The lamp socket 3 is mounted on one wall of this container and a V-shaped opening 4 is provided on the opposite wall. Brackets 5 are provided on the inner side of the wall with this opening adapted to support plates 6 of glass or other translucent material which will vary in colour according to the radiating bands of colour it is desired to throw on the wall 7 or the like as shown in Figure 1.

When these plates 6 are in position their edges overlap and close the apex of the V-opening 4 and extend along the edges of said openings substantially parallel with said edges.

In use the light source in the container beneath the opening produces a series of bands or rays of colour on the wall or like surface radiating out from a central point as shown in Figure 1. It will be readily understood that any desired series of bands of colours may be obtained by changing the coloured plates in the V-opening of the container.

Very attractive effects are obtained by fitting a red plate overlapping one edge, and a green plate overlapping the opposite edge of said opening.

Although for many purposes a V-shaped opening is preferable to any other form of opening, experiment has shown that many forms of opening in the container may be employed for the purpose in view. Again instead of a single aperture in one container a series of apertures may be employed with their corresponding plates of translucent material in several colours and instead of a single lamp, a series of lamps may be employed in the same container coacting with a series of corresponding apertures.

In Figures 4, 5 and 6 we show a multiple lamp unit fitted with a series of lamps coacting with a series of rectangular apertures 8.

In order to obtain good results is it necessary to employ a lamp having a concentrated type of filament. A lamp with a filament of the form known as "horseshoe" is satisfactory for the purpose in view but the lamp must be so placed in the container that its filament 9 is approximately at right angles to the surface to be illuminated and with the gap in the filament between the ends of the horseshoe running parallel with said surface or at a small angle in relation to it. The aperture or apertures in the container are always in a plane approximately parallel with the plane of the lamp filament 9 as shown in Figure 3. These apertures are either completely or partly filled with light transmitting material arranged to form clearly defined bands of colour in a design on a flat surface in not less than two colours and in the absence of coloured screens, in white bands between shadow bands. The interior surfaces of the container on which the light falls may be formed of any suitable light absorbing or non-reflecting material.

It should be understood that the apparatus forming this invention may be employed in connection with other lighting apparatus, for instance a cornice lighting trough. Very fine effects may be obtained by arranging in such a trough a central opaque plate with a V-opening and the above described coloured plates overlapping the edges of said V-opening.

Instead of an opening or openings on one wall of the container, the openings may be cut in opposite walls of the container to co-act with a single lamp, or with a pair or pairs of lamps respectively mounted in double lamp sockets positioned about the centre of the container and respectively facing towards the opposite walls containing said openings.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. Apparatus for forming radiating bands of coloured light on a flat surface in which the light source is positioned in a container with interior wall surfaces formed of light absorbing or non-reflecting material behind an opening in the wall of said container with coloured translucent screens overlapping the edges of said opening arranged to form bands of colour in a predetermined design on a flat surface.

2. A lighting device as claimed in claim 1 in which the light source is arranged behind a V-shaped opening in a wall of the container.

3. A lighting device as claimed in claim 1 in which the light source is arranged behind a series of openings in the wall of the container.

4. A lighting device as claimed in any

of the preceding claims in which a series of lamps are mounted in the same container coacting with a series of openings in the wall of the container.

5. A lighting device as claimed in any of the preceding claims in which the lamp has a horseshoe shaped filament and is positioned in the container with its filament in a plane parallel with the opening or openings in the wall of the container.

6. The lighting device substantially as described with reference to the accompanying drawings.

Dated this 11th day of January, 1932.

SEFTON-JONES, O'DELL & STEPHENS,
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Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1932

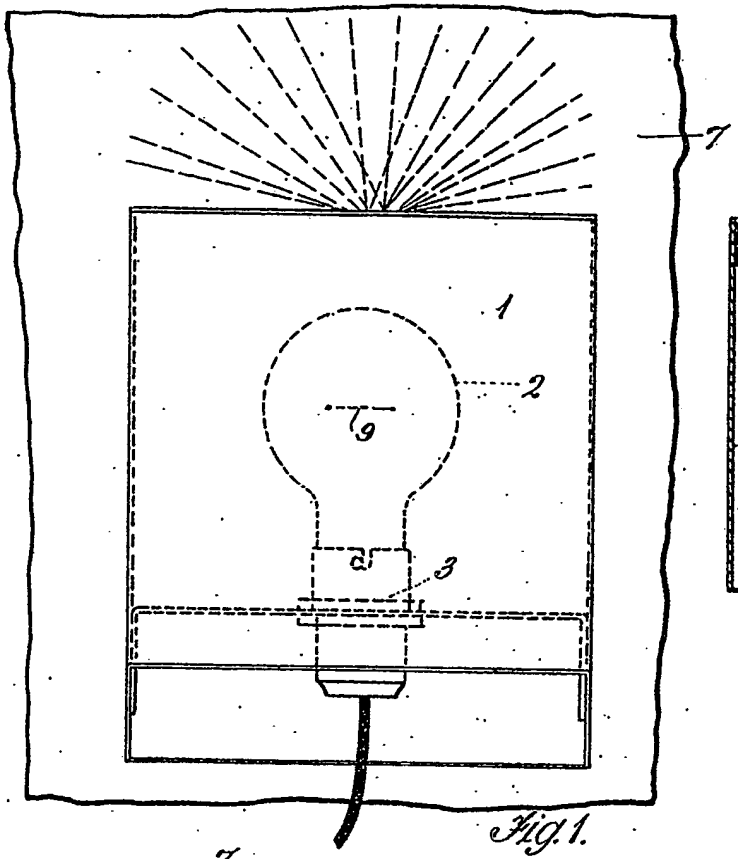
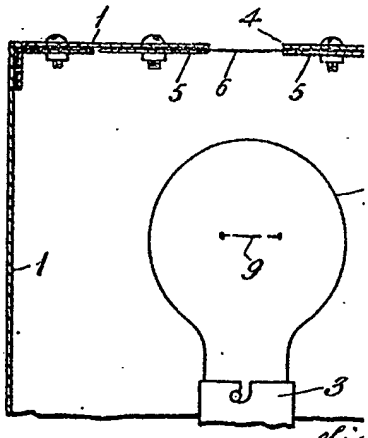


Fig. 1.



Fig

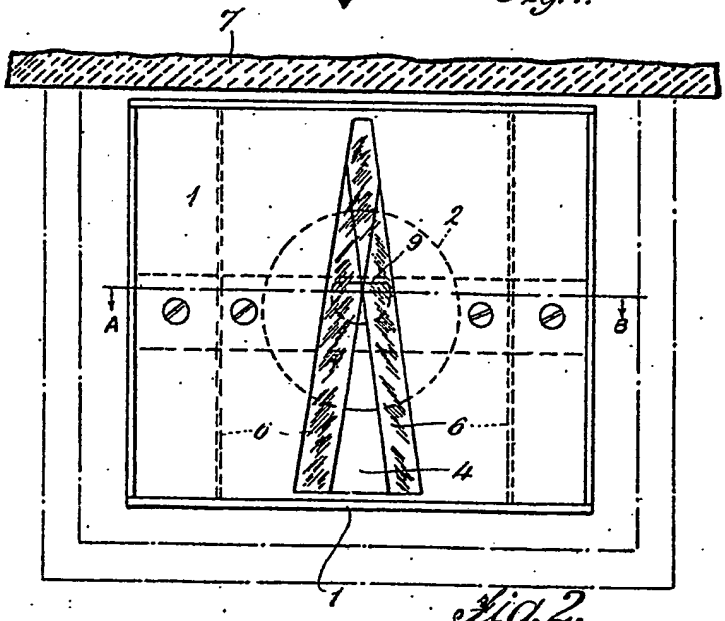
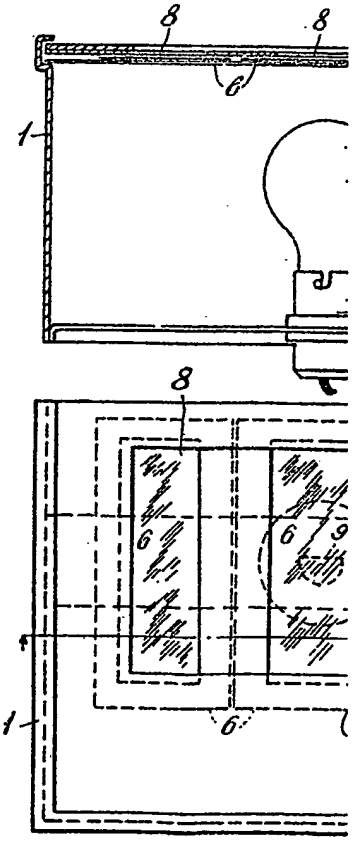


Fig. 2.



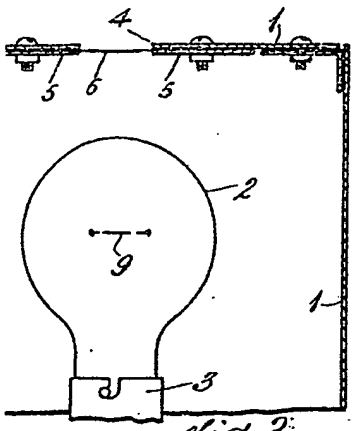


Fig. 3.

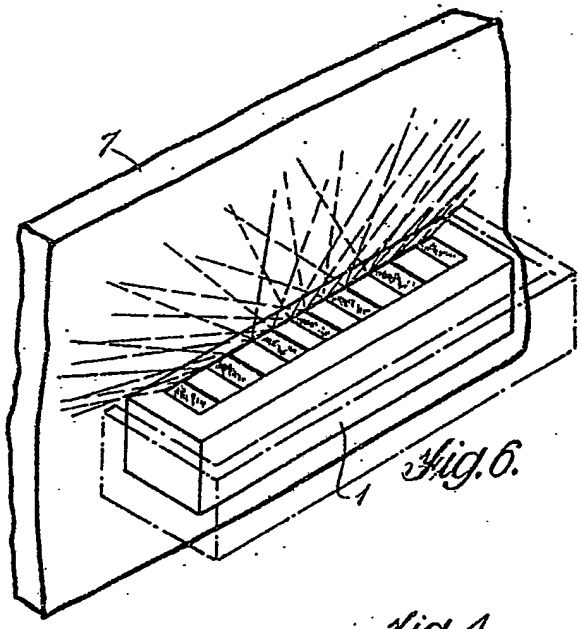


Fig. 6.

Fig. 4.

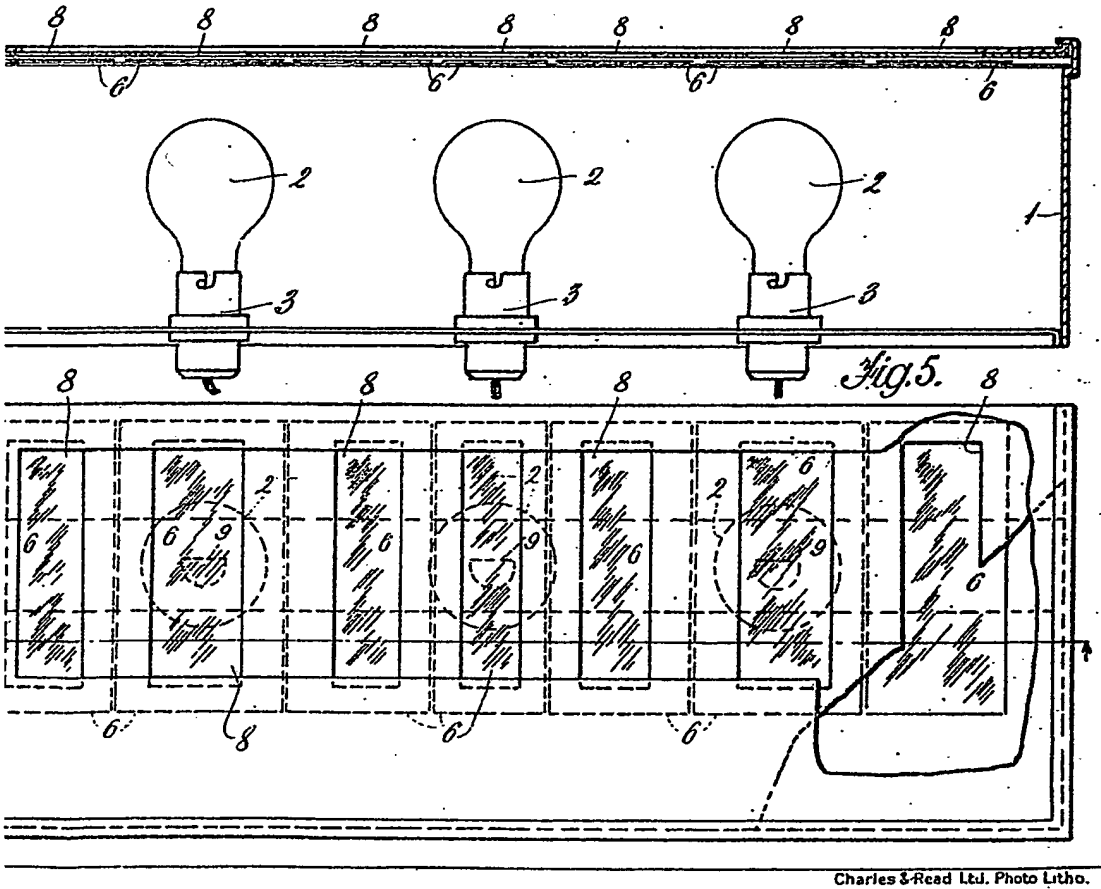


Fig. 5.

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376,744 COMPLETE SPECIFICATION

1 SHEET

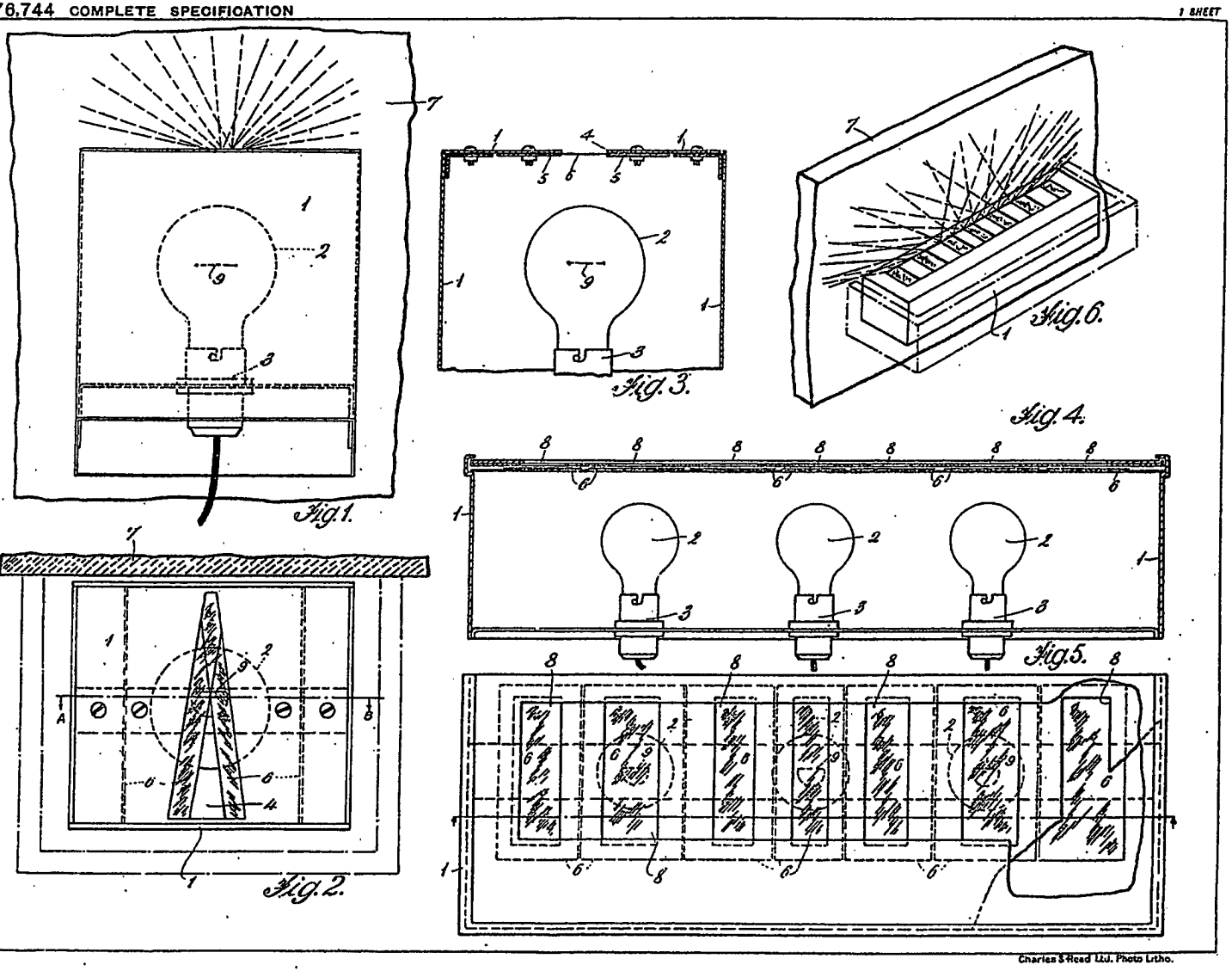

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

[This Drawing is a reproduction of the Original on a reduced scale.]

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